

REPORT TO: EDUCATION COMMITTEE 21 FEBRUARY

REPORT ON: ICT BROADBAND NETWORKING FOR SCHOOLS

REPORT BY: DIRECTOR OF EDUCATION AND HEAD OF INFORMATION TECHNOLOGY

REPORT NO: 133-2005

1.0 PURPOSE OF REPORT

- 1.1 To seek Committee approval to Commission the installation of wireless broadband networking for five secondary schools.

2.0 RECOMMENDATIONS

- 2.1 It is recommended that Committee authorises the Head of Information Technology to proceed with the procurement and installation of wireless broadband technology for five Secondary schools in the current financial year, and investigate and report on the feasibility of implementing this technology in the remaining secondary schools and the City's primary schools in future financial years.

3.0 FINANCIAL IMPLICATIONS

- 3.1 Procurement costs for the five school proposal are estimated to be £34,750. This will be funded by the Education Department Revenue Budget.
- 3.2 The annual recurring engineering maintenance costs associated with this additional level of capital purchases are estimated to be £ 2,500 in a full financial year. This will be funded by the IT Division Revenue Budget.
- 3.3 Cessation of current fixed line broadband rental charges associate with implementing the above technology are estimated to be £12,000 in a full financial year.

4.0 LOCAL AGENDA 21 IMPLICATIONS

- 4.1 In support of Local Agenda 21, the Information Technology Division have developed and implemented a scheme for recycling redundant computer equipment. This has been developed with an accredited local company.

5.0 EQUAL OPPORTUNITIES IMPLICATIONS

- 5.1 During the implementation of I.T. equipment and services, ongoing consideration will be given to the Council's Equal Opportunities Policies in the preparation of any resultant new practices affecting I.T. staff duties and opportunities.

6.0 BACKGROUND

- 6.1 Dundee City Council, in partnership with the Scottish Executive's National Grid for Learning (NGfL) initiative, have invested £4.2M in ICT in schools.
- 6.2 The Council have subsequently made provision for an annual refresh and update of Information and Communications Technology (ICT) equipment of £700,000 annually.
- 6.3 This investment has ensured that 4200 modern, internet connected computers are available for use across the City's educational establishments.
- 6.4 This continual ICT investment, alongside the provision of staff to support educational ICT has ensured that Dundee pupils have access to a wide range of ICT based learning materials.
- 6.5 The Scottish Executive are currently developing a national curriculum intranet known as the Scottish Schools Digital Network (SSDN). When this national system is deployed, it will give all connected schools computers access to rich media based educational content in all areas of the curriculum.
- 6.6 In parallel with the above development, the Education Department (in conjunction with the IT Division) intend to trial secure access to curriculum based materials in the home. The intention of this project is to further encourage the engagement of pupils and parents in learning and teaching.
- 6.7 All of the above initiatives demand fast reliable access to the internet.
- 6.8 Internet access is currently provided in a safe, secure reliable manner by connecting all schools to a central content filtering service located in the Council's secure facility in Tayside House. The content filtering service, alongside acceptable use policies, ensure that only appropriate internet content can be viewed in schools.
- 6.9 Dedicated broadband connections are currently in place from each school. These connections have a finite capacity, and in 9 secondary schools this is currently 2Mbits per Second (Mbps). Due to the recent re-build at Morgan Academy, a 10Mbps link has been installed.
- 6.10 These links are currently provided by Telewest Communications and the average annual recurring cost per secondary schools is £2,400.
- 6.11 Primary schools are generally connected by lower cost links which provide between 0.5 Mbps and 1.Mbps. These links are provided by BT and the average annual recurring cost per Primary school is £500.
- 6.12 The SSDN initiative mentioned earlier recommends that in order to take advantage of all the media content being made available, each secondary school should have a dedicated 10Mbps connection and each primary school should have a dedicated 6Mbps connection.
- 6.13 One of the key aims in the IT Division Service Plan 2003-2007 is to 'Enhance the Dundee Schools ICT infrastructure to facilitate early adoption of the National Schools Intranet'.

- 6.14 To achieve the above in the most cost-effective, safe and secure manner, the IT Division have been investigating emerging wireless connection technology.
- 6.15 The City's compact geography and the ability to use Council owned transmission sites make this a cost-effective, reliable and robust method of providing higher bandwidth to schools.
- 6.16 Health and safety considerations for mast and antenna based wireless technology have been fully investigated. The technology proposed uses low power transmission devices which typically outputs less than 1000th of the power of a cellular phone mast.

6.17 PROPOSAL

- 6.18 Implement a wireless broadband connection from the following secondary schools to Tayside House:
- Menzieshill HS
 - Craigie HS
 - Harris Academy
 - Braeview Academy
 - Baldragon Academy
- 6.19 This technology will provide up to 30Mbps bandwidth to each school.
- 6.20 Morgan Academy has been upgraded to 10Mbps connectivity through Telewest and it is not proposed to change this connection type during the three year contract period.
- 6.21 Provision should be made in the PPP projects budgets to convert the new or upgraded secondary schools to wireless connectivity. It is not considered cost-effective to do this work in advance of the PPP new builds or conversions.

7.0 CONSULTATION

- 7.1 The Chief Executive, Depute Chief Executive (Finance), Depute Chief Executive (Support Services), Assistant Chief Executive (Management) and Assistant Chief Executive (Community Planning) have been fully consulted in the preparation of this report and are in full agreement with its proposals.

8.0 BACKGROUND PAPERS

- 8.1 None.

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AW/CDGT

11 February 2005